

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kie Y. Ahn et al.

Title: METHODS FOR MAKING INTEGRATED-CIRCUIT WIRING FROM COPPER, SILVER, GOLD, AND OTHER METALS

Docket No.: 303.648US1

Serial No.: 09/484303

Filed: January 18, 2000

Due Date: June 30, 2003

Examiner: Neal Berezny

Group Art Unit: 2823

Commissioner for Patents

P.O.Box 1450

Alexandria, VA 22313-1450

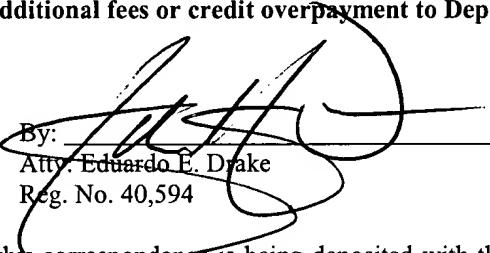


We are transmitting herewith the following attached items (as indicated with an "X"):

- A return postcard.
- A Response under 37 CFR 1.111 (2 Pages).
- A Supplemental Information Disclosure Statement (1 pg.), Form 1449 (3 pgs.), and copies of 68 cited documents.
- A check in the amount of \$180.00 to cover the fee for consideration of Supplemental Information Disclosure Statement under 97(c).

If not provided for in a separate paper filed herewith, Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

By:   
Atty. Eduardo E. Drake  
Reg. No. 40,594

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Name

Gina M. Uphus

Signature

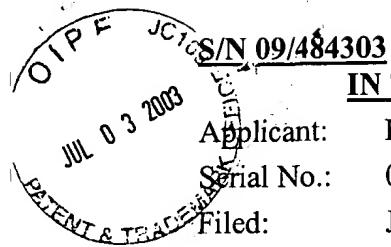


Customer Number 21186

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

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(GENERAL)



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kie Y. Ahn et al.

Examiner: Neal Berezny

Serial No.: 09/484303

Group Art Unit: 2823

Filed: January 18, 2000

Docket No.: 303.648US1

Title: METHODS FOR MAKING INTEGRATED-CIRCUIT WIRING FROM  
COPPER, SILVER, GOLD, AND OTHER METALS

RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents  
P.O.Box 1450  
Alexandria, VA 22313-1450

**Interview Summary**

In response to the Office Action mailed on March 31, 2003, applicant's patent counsel Eduardo Drake interviewed Ex. Berezney on June 27, 2003. The focus of the interview was the fact that the Office Action did not reflect applicant's earlier facsimile filing of a Preliminary Amendment on March 12, 2003. Agreement was reached that a new, superceding non-final Office Action reflecting the Preliminary Amendment would be prepared and mailed in due course.

Applicant further notes that a Supplemental Information Disclosure Statement accompanies this paper, and requests respectfully that the Examiner consider the associated references in preparation of the new, non-final Office Action.

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### CONCLUSION

The Examiner is invited to telephone Applicant's attorney at (612) 349-9593 to facilitate prosecution of this application.

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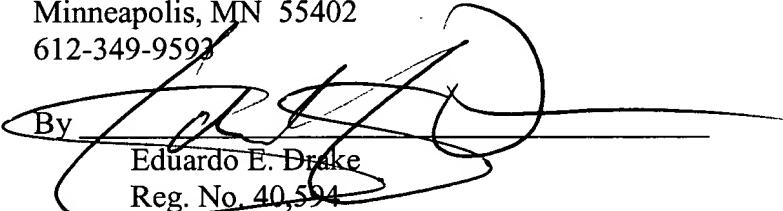
Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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Date 30 Jun 2003

By 

Eduardo E. Drake  
Reg. No. 40,594

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Name

Gina M. Uphus

Signature



S/N 09/484303

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kie Y. Ahn et al.  
Serial No.: 09/484303  
Filed: January 18, 2000  
Title: METHODS FOR MAKING INTEGRATED-CIRCUIT WIRING FROM COPPER,

Examiner: Neal Berezny  
Group Art Unit: 2823  
Docket: 303.648US

Assistant Commissioner for Patents  
P.O.Box 1450  
Alexandria, VA 22313-1450

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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Supplemental Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. § 1.97(c)(2), Applicants have included the fee of \$180.00 as set forth in 37 C.F.R. § 1.17(p). Please charge any additional fees or credit any overpayment to Deposit Account No. 19-0743.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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P.O. Box 2938  
Minneapolis, MN 55402  
612-349-9593

By  
Edwardo E. Drake  
Reg. No. 40,594

Date 30 Jun 2003

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Name Gina M. Uphus

Signature Gina M. Uphus

Substitute for form 1449A/PTO						
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(Use as many sheets as necessary)</small>		<i>Complete if Known</i>				
OCTOBER 2003 JUL 03 2003 U.S. PATENT & TRADEMARK OFFICE		<b>Application Number</b> 09/484303				
		<b>Filing Date</b> January 18, 2000				
		<b>First Named Inventor</b> Ahn, Kie				
		<b>Group Art Unit</b> 2823				
		<b>Examiner Name</b> Berezny, Neal				
Sheet 1 of 3		Attorney Docket No: 303.648US1				

### US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US-01/0002333	05/31/2001	Huang, Chao-Yuan , et al.	438	637	03/29/1999
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	US-2002/0028552	03/07/2002	Lee, , et al.	438	243	
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EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		<i>Complete if Known</i> <b>Application Number</b> 09/484303 <b>Filing Date</b> January 18, 2000 <b>First Named Inventor</b> Ahn, Kie <b>Group Art Unit</b> 2823 <b>Examiner Name</b> Berezny, Neal				
		Attorney Docket No: 303.648US1				
Sheet 2 of 3						

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#### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>
	JP-07-321111	08/12/1995	Tetsuo, K.	H01L	21/320 5	

#### OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

EXAMINER

DATE CONSIDERED

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Sheet 3 of 3		Attorney Docket No: 303.648US1	



Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
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		KALOYEROS, A. E., et al., "Blanket and Selective Copper CVD from Cu(FOD)2 for Multilivel Metallization", <u>Mat. Res. Soc. Symp. Proc.</u> , Vol. 181,(1990),6 pages	
		KLAUS, J. W., "Atomic Layer Deposition of Tungsten Nitride Films Using Sequential Surface Reactions", <u>Journal of the Electrochemical Society</u> , 147(3),(2000),pp. 1175-1181	
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		MIN, J. , et al., "Metal-organic atomic-layer deposition of titanium-silicon-nitride films", <u>Applied Physics Letters</u> , 75(11), (1999),pp .1521-1523	
		VENKATESAN, S. , "A High Performance 1.8V, 0.20 micrometer CMOS Technology with Copper Metallization", <u>IEEE</u> , (1997),pp. 769-772	

EXAMINER

DATE CONSIDERED